STN/EAST search history

(FILE 'HOME' ENTERED AT 15:22:39 ON 01 AUG 2005)

FILE 'AGRICOLA, MEDLINE, CAPLUS, BIOSIS' ENTERED AT 15:22:44 ON 01 AUG 2005

L1	2	S DETOXIFY (10N) DEINOCOCCUS
L2	2	DUP REM L1 (0 DUPLICATES REMOVED)
L3	1450	S DEINOCOCCUS AND RADIO?
L4	1436	S DEINOCOCCUS (10N) RADIO?
L5	1434	S DEINOCOCCUS (5N) RADIO?
L6	602	S L5 AND RADIATION
L7	337	DUP REM L6 (265 DUPLICATES REMOVED)
L8	325	S L7 AND RADIODURANS
L9	325	DUP REM L8 (0 DUPLICATES REMOVED)
L10	136	S L9 AND PY<1999
L11	0	S L10 AND MER
L12	322	S RADIODURANS (3N) (RADIO?)
L13	0	S L12 AND MER
L14	0	S L13 AND MERCURY
L15	559	S MER (2N) OPERON
L16	9	S L15 AND RADIO?
L17	282	DUP REM L15 (277 DUPLICATES REMOVED)
L18	5	DUP REM L16 (4 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 15:54:46 ON 01 AUG 2005

FILE 'AGRICOLA, MEDLINE, CAPLUS, BIOSIS' ENTERED AT 15:55:15 ON 01 AUG 2005

L19	38	S MER AND BIOREMEDIATION
L20	24	DUP REM L19 (14 DUPLICATES REMOVED)
L21	14	S L20 AND MERCURY

FILE 'STNGUIDE' ENTERED AT 15:56:50 ON 01 AUG 2005

(FILE 'HOME' ENTERED AT 13:50:18 ON 09 AUG 2005)

FILE 'AGRICOLA, MEDLINE, CAPLUS, BIOSIS' ENTERED AT 13:50:26 ON 09 AUG 2005

L1	38	S BIOREMEDIATION AND DEINOCOCCUS
L2	27	DUP REM L1 (11 DUPLICATES REMOVED)
L3	4	S L2 AND (MER OR MERCURY)
L4	322	S BIOREMEDIATION AND MERCURY
L5	255	DUP REM L4 (67 DUPLICATES REMOVED)
L6	66	S L5 AND PY<1998
L7	118	S L5 AND HEAVY
L8	27	S L6 AND HEAVY

L8 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:455498 CAPLUS
DN 127:99066
TI Demonstration of an innovative **heavy** metal and radionuclide **bioremediation** process
AU Gonzalez, Adrian; Graves, Duane; Kearney, Theresa; Holroyd, Chris; Eccles, Harry
CS IT Corporation, Knoxville, TN, USA
SO In Situ and On-Site Bioremediation, Papers from the International In Situ and On-Site Bioremediation Symposium, 4th, New Orleans, Apr. 28-May 1, 1997 (**1997**), Volume 3, 393-397 Publisher: Battelle Press, Columbus, Ohio.
CODEN: 64SMAQ
DT Conference
LA English
AB **Heavy** metal pollution has historically been considered outside the realm of environmental issues suitable for treatment by biol. processes. In recent years, growing interest in metals **bioremediation** has resulted in a few techniques that minimize the risk of exposure to metal pollutants by immobilizing the metal or making it insol. Other techniques have used either living or dead biomass to concentrate metals from soil or water. An innovative 2-step biol. treatment process is being commercialized that efficiently removes metals from soil and then concs. the solubilized metals. **Bioremediation** of **heavy** metal polluted soil was examined as a function of phys. soil characteristics; pollutant type; and concentration, inorg. soil chemical, and soil microbiol. The rate and effectiveness of the technol. with a specific polluted soil was examined The technol. is particularly attractive for treating radioactive and mixed waste.

L8 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:579204 CAPLUS
DN 119:179204
TI Bacterial **heavy** metal detoxification and resistance systems
AU Silver, Simon
CS Univ. Illinois, Chicago, IL, 60680, USA
SO Biotechnol. Environ. Sci. [Proc. Int. Conf.] (**1992**), 109-29.
Editor(s): Mongkolsuk, Skorn; Lovett, Paul S.; Trempy, J. E. Publisher: Plenum, New York, N. Y.
CODEN: 59EQAQ
DT Conference; General Review
LA English
AB A review with 89 refs. Bacterial plasmids contain genetic determinants for resistance systems for Hg2+ (and organomercurials), Cd2+, AsO2-, AsO43-, CrO42-, TeO32-, Cu2+, Ag+, Co2+, Pb2+, and other metals of environmental concern. In some cases, there is the potential for using genetically engineered microbes for bio-remediation. Recombinant DNA anal. has been applied to **mercury**, cadmium, zinc, cobalt, arsenic, chromate, tellurium and copper resistance systems. The eight **mercury** resistance systems that have been sequenced all contain the gene for mercuric reductase, the enzyme that converts toxic Hg2+ ions to less toxic volatile metallic Hg0. Four of these systems also determine the enzyme organomercurial lyase, which cuts the Hg-C bond and thus detoxifies methylmercury and phenylmercury. Two sequenced Cd2+ resistance determinants govern cellular efflux of Cd2+ assuring a low level of intracellular Cd2+; not an obvious candidate for **bioremediation**. Cadmium accumulation by bacterial metallothionein or phytochelatin is a potentially useful process, but only preliminary reports have appeared on bacteria producing polythiol polypeptides. For arsenic resistance, a unique efflux ATPase maintains low intracellular As levels. A bacterial AsO2- oxidase has been reported, with the potential of converting more toxic As(III) into less toxic As(V), but this system has not been studied in recent years. For chromate, resistance results from reduced cellular uptake. However, both soluble and membrane-bound Cr(V) reductase bacterial activities convert more toxic Cr(VI) to less toxic Cr(III) in different bacteria.

L8 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:79950 CAPLUS
DN 116:79950
TI Bacterial **heavy** metal resistance systems and possibility of **bioremediation**
AU Silver, Simon
CS Coll. Med., Univ. Illinois, Chicago, IL, 60680, USA
SO Biotechnol.: Bridging Res. Appl., Proc. U.S.-Isr. Res. Conf. Adv. Appl. Biotechnol. (**1991**), Meeting Date 1990, 265-87. Editor(s): Kamely, Daphne; Chakrabarty, Ananda M.; Kornguth, Steven E. Publisher: Kluwer, Boston, Mass.
CODEN: 57MWA2
DT Conference; General Review
LA English
AB A review with 101 refs. with emphasis on the mol. biol. of bacterial resistances to **mercury**, arsenic, and chromate.